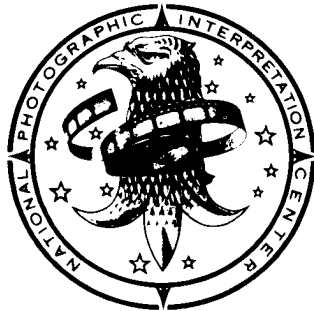


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## **Summary Report**

**NATIONAL PHOTOGRAPHIC  
INTERPRETATION CENTER**

# **DEPLOYMENT OF THE SOVIET ADEH-5 MICROWAVE ANTENNA (TSR)**

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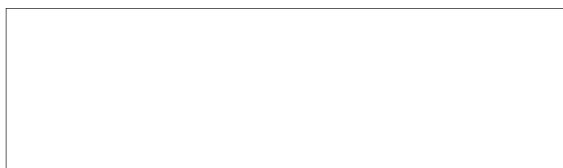
April 1978

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**DISSEMINATION CONTROL ABBREVIATIONS**

NOFORN-	Not Releasable to Foreign Nationals
NOCONTRACT-	Not Releasable to Contractors or Contractor/Consultants
PROPIN-	Caution-Proprietary Information Involved
USIBONLY-	USIB Departments Only
ORCON-	Dissemination and Extraction of Information Controlled by Originator
REL . . .	This Information has been Authorized for Release to . . .

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## DEPLOYMENT OF THE SOVIET ADEH-5 MICROWAVE ANTENNA (TSR)

(TSR) A new microwave antenna has been identified at two locations in the USSR (Figure 1). This antenna, designated ADEH-5 by the Soviets,<sup>1</sup> was first observed erected at Zapadnaya TV Relay Station [REDACTED] and at Spokoyunny Radio Relay Station (BE [REDACTED])

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(U) The ADEH-5 antenna consists of a 5-meter parabolic antenna with an additional parabolic structure attached to the back. This antenna is a higher gain antenna used for improving the performance characteristics of a radio-relay link over obstructed regions where the particular obstruction is small and located far from the active stations.<sup>1</sup>

(TSR) At Zapadnaya TV Relay Station, [REDACTED] two ADEH-5 antennas were observed in four unassembled sections lying on the ground (Figure 2) [REDACTED] the two ADEH-5 antennas were observed assembled and erected (Figure 3). This station already has several diverse types of antennas, including two HORSESHOE, two WIDE SCREEN, and three R-60/120 antennas (Figure 3).

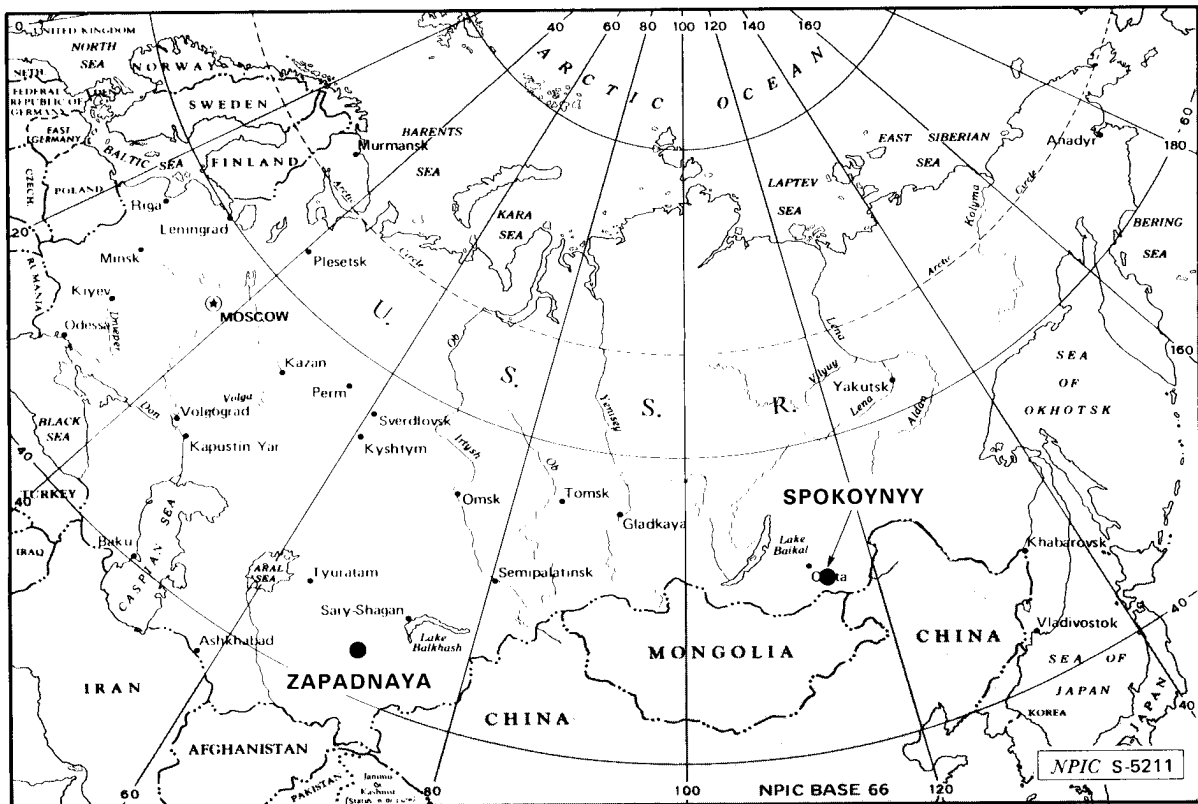
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FIGURE 1. LOCATIONS OF ADEH-5 MICROWAVE ANTENNAS IN THE SOVIET UNION

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(TSR) At Spokoynyy Radio Relay Station, four ADEH-5 antennas were observed deployed in a configuration that differed from those deployed at Zapadnaya TV Relay Station. At Spokoynyy, for space diversity, four ADEH-5 antennas were paired both back-to-back and side-by-side (Figure 4).

(S) Zapadnaya TV relay Station is in the Central Asia Military District 55 nautical miles (nm) east of Dzhambul and Spokoynyy Radio Relay Station is in the Transbaykal Military District 78 nm southeast of Chita.

**REFERENCE**

1. B.S. Yakunin, "Improvement of Performance Characteristics of Radio-Relay Links with Obstructed Regions," *Telecommunication & Radio Engineering*, Scripta Publishing Company, Washington, D.C. Vol 30/31, pp 5-7 September 76, (UNCLASSIFIED)

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